Virtual and Actual World-Building in *Age of Empires II*

Master's Thesis

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1. INTRODUCTION

*Age of Empires II* is a popular strategy video game from 1999. It is centered on building empires in which the player progresses through fours ages: the *Dark Age*, the *Feudal Age*, the *Castle Age*, and the *Imperial Age*, spanning a 1000-year time frame, from the Early Middle Ages to the Renaissance. Yet it is not just a game where the player is focused on strategy and tactics, but also a game in which aesthetics brings the player closer to the old times in which knights and kings were at the heart of society. One of the specifics of *Age of Empires II* is that is centered on repetition, a phenomenon that touches both the actual and the virtual world as the game itself belongs to both of these spheres. The repetition happening in the game brings about changes in perception related to both the game and the real-world history on which it is based. This is done with the help of the virtual. This change in perception occurs gradually in the present while the game is being played. The game describes a world that has been. The world building it offers when seen through the prism of cycles of repetition brings about the formation of the player's own ideology in relation to *Age of Empires II* and the everyday actual world surrounding the player.

The story of *Age of Empires II* is one full of dreams that have been taken from the actual world and put into the virtual world of ideas. The player can shape their own ideology in contact with the game that is to present its own rendition of art in relation to innumerable stories that have passed through world history. World building as the main underlying theme of the game is the beauty of the empires that can be created by engaging in a world that is non-existent and yet was created from ideas that are real, from ideas existing in the actual world that surrounds the player. *Age of Empires II* offers a voyage to an epoch in the past that has fascinated since the time of its beginning for its beauty and wonders, a place where real and the imaginative meet to give a story to the player who takes part in the phenomenon of world building as it once was.
2. REPETITION AND IDEOLOGY

Repetition can be seen in various functions of strategy games and its essence consists in how it influences the person interacting with the phenomena it produces. Repetition in and of itself is what enables world-building inside games with the small and sometimes almost invisible steps it creates through the constant reinventing of itself. Worldbuilding is the process of constructing a complete and plausible imaginary world that serves as a context for a story. (Zaidi, 2019). And as von Stackelberg and McDowell state, it is also: "the creation of imaginary worlds with coherent geographic, social, cultural, and other features" (qtd. in Zaidi, 2019). When world building is in the process of allowing the player to explore the distant past, repetition is the phenomenon responsible for the changes happening in the perception of the game tied to the reality of today. In the imaginary worlds that are created with the help of world building there are image of things that are not only not actually present, but which are indeed not to be found in the primary world (Tolkien, 1947: 6) in respect to the secondary world which is created with imagination. As in most games, in Age of Empires II this phenomenon of repetition is what keeps the course of the game afloat. Repetition has the specific aim of creating innumerable circles of one and the same action. This aim enables the player to relax and enjoy the game while at the same time running other errands in their mind connected to the game but also to the real world. There are advantages and disadvantages to this state.

2.1 Dromena

The repetitious action that accompanies many of the player actions in Age of Empires II can be illuminated by means of introducing the idea of dromena. Dromena are phenomena originating in ancient Greek rites which were either the re-enactment of something that had happened, whose repetition, vital to society, was seen to be aided by the rite, or they were the
enactment of something that had not yet happened but was most ardently desired (Clarke 1973: 106). Dromena could be said to have been intrinsic to the rites the Greeks performed in that their function was tied to natural processes that occurred through the four seasons. The connection between the dromena present in the Greek rites and the dromena present in Age of Empires II can be seen through not only the cyclical understanding of nature in antiquity but also the cyclicality of the land that is being cultivated through constantly making virtual farms. These farms are created in expectation of their production of crops which prolong the lives of the peasants cultivating them, in this case indirectly. Yet the farms disappear after a certain period of time as the function of dromena sets in to supply an answer for the ardent desire of the community for new growth. In a way both an escape and a newly rediscovered happiness are offered through dromena, both of which comfort individuals in their expectations of the future. The repetition contained in the dromena obscures and also paves the way for the player to lose themselves in a myriad of minimalistic, simultaneous activities happening in the game. According to Alfie Bown,

This repetitious function of the videogames can be illuminated by an old philosophical idea: the idea of dromena. Dromena literally means "things which are left running," but it is also to be taken with its onomatopoeic implication: things which drone on and on, repeating again and again in endless cycles. (Bown, 2018: 81)

The dromena in Age of Empires II can be viewed in two close yet distinct ways. The repetitious actions of the villagers remind us of the hard work done in the farm fields by diligent peasants. They are droning their days away through repetitive performances of what is their duty. Of course they do not "actually" do the work of food production in the game, but the repetitive nature of their actions acts as a kind of promise of food-to-come. So, in a
way the Greek origin of the concept of dromena can be seen in the sense that the peasants do not just perform work on their land, but their work is a symbol, or a ritual, making them similar to the Greeks many of whose own rituals were connected with the earth that gave them food, water, and shelter.

Yet the function of dromena in video games adds a new element. Rather than being rituals to bring about a new future, video game dromena can be viewed as being in the service of ingraining a certain policy of behaviors in the mind of the gamer by constant cycles of repetition (Bown, 2018: 81). In other words, rather than bringing about an object in the future (more food, for example), video game dromena bring about new behavior now. Something that might seem as merely utilitarian such as chopping wood or mining gold can have a subdued yet wisely crafted function. These repetitive actions offer the individual a chance to experience moments of non-labor. These moments empty the mind of the burdensome everyday through dromena which are planted in the game as a means of creating progress in the gameplay. We are not invited to focus all of our energy on the workings of the dromena but they are an unavoidable part of the experience, which then opens a new window for the individual. One does not need to think so actively anymore as much of the thinking is done by the dromena that keep repeating the minuscule details of daily life. The real world is substituted by the virtual happenings that are centered on a thousand small repetitive functions that build up a larger picture where the player commands all the actions of the units but does not need to think as actively as in the real world. This is precisely how worldbuilding appears in Age of Empires II: through smaller activities that are the basis of the game and of the experience of building empires. What is important here are not so much the actions themselves, but how through interacting with the small repetitive contents of the game players are freed from the pensive efforts of everyday life. As Bown argues:
By inviting us into a process of dromena, the user can go wherever they want psychologically, and thus games can offer a kind of escapism which goes beyond that offered even by the most involving book or film. (Bown, 2018: 82)

Yet we can take this a even step further. Cycles of repetition bring about an unconscious implementation of ideas that might or might not be in harmony with what the individual perceives as just. I argue that repetition is used so that the exploitation of resources in Age of Empires II can be seen as the natural course of things. Even though the first function of the dromena is that of repetitious running in the background, these dromena can also assume another function, namely that of giving us the illusion that we have taken our mind off the constant labor of having to put in mental effort towards their exterior life. This enables the individual to think that they are free from their exterior life and they have moved towards interior life. The escape from the things that burden the individual through dromena gives the illusion that one is really psychologically free from the repetitive occurrences of everyday life. However, as much as the individuals playing the game would like to believe themselves to be free of the exterior expectations of life, the game only creates an imagined semblance of freedom which has the role of opening the mind of the player towards the ideology of the game. The more the effect of the dromena is felt during the game, the stronger this feeling of freedom is and their subtleties can more easily make way for the ideology of the game as they are not expected or in any way attended to. They are visible in their representational part in the form of villagers performing various tasks and nature going by its course, but invisible in their agency.
Figure 1. Screenshot from *Age of Empires II*

Figure 1 most aptly demonstrates how the idyllic nature of the game involves the use of dromena as the perfect opportunity to influence the player through the presence of their relaxing and aesthetically pleasing appearance. The villagers represented are fulfilling their duties by tilling the farms and the boats are fishing on the sea. All of this is accompanied by birds gathered around the dock and an eagle overflowing the scene. Such conditions present the player with a world that is relaxing and aesthetically captivating. The atmosphere intermingled with the workings of the dromena is presenting a safe space with the help of which the player’s mind can relax and wander. Bown appropriately states that,

It is precisely the feeling of freedom which allows us to imagine that in our psychological interiors we can think about whatever we want, that enables ideology to
be effectively imposed by the repetitious patterns in the gaming experience. It is because we feel free to allow our thoughts to wander while we are gaming that the game's ideology can be imposed on us. (Bown, 2018: 83)

We sense ourselves liberated and this liberation provides the framework for the intrusion of ideology. In other words, liberation through Age of Empires II is ideology, because it is liberation from the actual conditions of existence. However, these conditions of existence present in the modern world are not the direct agent behind the creation of ideologies. As Althusser argues, to understand this it should be noted that while living in the modern world it is not the real conditions of existence and the real world, that individuals represent to themselves in ideology, but above all it is their relation to those conditions of existence which is represented. It is this relation which is at the center of every ideological, i.e. imaginary, representation of the real world (Althusser, 2017: 769). Individuals playing Age of Empires II can be a part of a society imbued with trends that cause fatigue and inner dissatisfaction. If they are in contact with situations such as the pervasiveness of accelerating consumerism or the ever increasing need to seek external fulfillment they might invent imaginary reasons to put up with the situations at hand. So it would seem that the extreme consumerism or the empty trends symptomatic of the world are not what causes the creation of ideologies themselves, but rather a catalyst that influences the individual's relation to their pervasiveness and the eventual creation of the ideology. Thus, the individual must create their own ideology. The ideology can be introduced stealthily as discussed above but this need not always be the case when gaming is in question.

One can also suggest that ideology is introduced by making the player fully aware of the real-world situation of the repetitive nature of certain actions and by proffering a very specific relationship to these real-world circumstances: making the player concentrate on
what is presently happening in the game in short intervals through a kind of *estrangement*. Put otherwise, estrangement functions as the relationship between the player and the real-world conditions of repetition. Estrangement would refer here to the breaking up of old habits that were formed around certain phenomena and their reception (Spiegel, 2008: 369). The way old things are received in new situations is what creates the axis of the phenomenon of estrangement. When, for example, one is creating soldiers in the barracks and amassing an army later in the game, the experience might at the beginning be something that goes unnoticed, but by constant repetition of this action the player becomes aware of the fact that they are creating an ever-larger army and accelerating things which will finally culminate in the demise of one of the empires. At the outset of this repetitive cycle of creating an army, the player is in a passive situation as they are overpowered by the experience of the creation of single soldiers from many barracks present on their part of the map. But slowly, even though it might have gotten boring due to the number of times this action has been repeated, the player eventually assumes an active role as their attention has been brought to what is happening in the game by demanding concentrated effort from the player by causing curiosity through a simple accumulation of units or resources as a direct result of the repetitive actions present in the game. We can call this an act of estrangement, meaning that we truly experience that which has been made familiar by defamiliarizing it again on purpose (Spiegel 2008: 369) through constant activity which in this case is centered on the acceleration and multiplication of units. Because of the number of times the action is repeated, it begins to command the player’s attention and give a new meaning to the experience which was heretofore almost unnoticed and bore no incitement towards engaging fully in the game's progress. Thus the player becomes not just engaged in the active sense of interacting with the game but also aware of what is happening because of the effect the dromena have caused.
Now, repetition is important for estrangement which in turn is important for the influence of ideology because it is the key factor in what creates a world in which the player is being made aware of the process of play by being forced to attentively engage in the act they are undertaking. They are engaging in this act through the process of world building. As Mark J. P. Wolf states: "this process is nothing else than creating an imaginary world which is an intrinsically human activity" (qtd. in Boni 11), by which individuals exercise their imagination through putting effort into making empires that are worlds centered on the image of old civilizations based on how the game developers envisioned them. Conversely, the ideology of the game is snuck in stealthily. So, repetition works through estrangement which is making the player aware of the virtual world of Age of Empires II, but also through the effects of the ideology which influences the player secretly because the phenomenon of estrangement is occupying the player’s attention. The ideology of the game may cause changes in the player’s perception be it of the virtual world, be it of the actual world they live in. This should be seen through the lens of the repetitive actions abounding in the game. The constant repetition of one action should be seen as something that can either change itself without being perceived by the spectator or it can be seen as something that changes the spectator based on how this endless cycle is defined. At first it would seem logical to deduce from the endless cycle of repetitions that the action itself is not changed nor does it change in interaction with the agent who manages its performance.

2.2 Intensive Forces, the Virtual, and the Actual

When taking into consideration the argument above, we should actually say that repetition signifies that new creations are summoned by the process of perceiving reality anew each time repetition takes place. Each new rebirth of the active force, which could be defined as the intervention of the player that becomes manifest in the game, includes the idea that the
elements that are constituent to the game are seen every time as a new occurrence. The activities with which the player is already acquainted are used to once more bring out the same result which is nonetheless new inasmuch as it is appearing again and is directly being experienced by the agent. Here we are relying on a reading of Deleuze, who in *Difference and Repetition* points out that:

Repetition in the eternal return never means continuation, perpetuation or prolongation, nor even the discontinuous return of something which would at least be able to be prolonged in a partial cycle (an identity, an I, a Self) but, on the contrary, the reprise of preindividual singularities which, in order that it can be grasped as repetition, presupposes the dissolution of all prior identities. (Deleuze, 1968: 201-202)

In repetition, there is difference. Previous identities are dissolved in new cycles. Yet something remains the same. What is it? In one sense these comments on repetition are true for many types of video games. However, *Age of Empires II* is specifically interesting because in fact it gives the possibility of ascertaining two kinds of repetition. The agent, i.e. the player repeats the same action again and again and this performance is accompanied by the computer repeating the same action again and again which is manifest in the game itself. To better understand what is happening to the player being accompanied by these repetitive occurrences, we first need to understand what are intensive forces and what are the virtual and the actual. These concepts will help us approach the world building that is happening through the repetitive activities that are taking place both in the game and in the mind of the player following the linear flow of the game. These repetitive activities and the replaying of the game impose particular repetitive structures on the player (Hanson, 2018: 6) while they are engaging in the worldbuilding the game offers. For example, in *Age of Empires II* the
birds hovering over the dock do so in a repetitive manner without changing their course. This repetitiveness can be seen as influencing the player to accommodate themselves to the rhythm of the game through instances where the player is engaged in following the storyline of the game. One repetitive instance, the droning of the computer contained in the small actions that can be perceived in how the game works, exerts its influence on the player who is closely monitoring what is happening and whose active presence is the other repetitive instance reflected in frequently repeating the same activities while playing the game. When confronted, these two instances are paving the way for the phenomenon of world-building through the repetitive processes that are perceived. The first process, i.e. the droning of the computer, is influencing the player who is engaging in repetitive actions. This influence is causing the player, who through their repetitive undertakings is giving an answer to the droning of the game, to open up to the process of the creation of a new world which is however built on a virtual level. It is a world that has components of reality in itself but is not real as it is being modelled on the player's experience of world building in Age of Empires II and thus exists only in the realm of ideas. Consequently, we can suggest that this world is born out of the player's ideology, their own perception of the game they are playing which is built upon elements and ideas taken from the actual but which now exists in the virtual, i.e. it exists as an idea.

The changes the player undergoes when confronted with the game are intrinsically tied to the forces to which they are subject. These forces we are interested in are intensive forces since they introduce new aspects to the player's experience without destroying its essence or turning it into something completely different. As such, intensive forces are seen as forces which change an object but do not cause it to undergo a change in kind (DeLanda, 2002: 27). Thus for example, the intensive forces of boredom and excitement influence the player while they are in the process of following the rhythm of the game. When the player is
engaged in making progress in any direction, be it military, economic, or purely aesthetic, they are changed in the sense that they become a tactician, economist or aesthetician, but this change does not mean that they have literally assumed any of these functions. The functions, when seen through the prism of the game, are merely states through which the player potentially passes without being changed in kind by any of them. The player is changed, be it emotionally or ideologically, but the player is still a player, and not some other entity.

Another way to think about this change is through the concepts of the *actual* and the *virtual*. The actual is the player state at the beginning of the game, while the virtual is all the states the player could become through intensive forces. The virtual, in a sense, leaves behind traces of itself through the work of intensive forces which are felt the most in the processes it animates (DeLanda, 2002: 44), so this would indicate that the virtual is something that is not contained in substantial changes that happen to an individual. The virtual simply has in itself all the varying states an individual might experience while playing *Age of Empires II* for example. As such, the game is the medium by means of which the actual state of the player can be transformed into the virtual states that are available through the various activities of the game. Once the player is immersed in the experience, their state can also be transformed into the virtual states of defeat or triumph. For example, given the way the ascent and descent of civilizations are treated in the game, we should take notice of how the construction and the deconstruction of the empires in *Age of Empires II* impact the player. Winnerling underlines that:

Significant for all three main titles of the AGE OF EMPIRES series is the theming of historical progress of civilization… AGE OF EMPIRES II begins in the Dark Ages after the collapse of the ancient European empires… The metanarrative of the
tripartite periodisation of world history with its civilizational collapses is thus exactly represented in the AGE OF EMPIRES series. (Winnerling, 2014: 70-71)

In the manner in which the game progresses, the player creates expectations which later on create virtual states depending on the outcome. One example from the game would be the option of regicide with which the player chooses to embark on an adventure in which they must kill the enemy king while protecting their own. By actively working against the enemy king they might overlook the possibility that one of the other players is plotting against their own king. The enthusiasm and ambition of an attentive player are quickly erased and their place is taken by a sense of surprise and sadness if their own king gets killed. These virtual states are centered on the hopes of triumph or the disappointment of an easy defeat.

Figure 2. Screenshot from Age of Empires II
If Figure 1 is compared to Figure 2 we notice that there is a difference in the intensive forces that are at work. The first image offers us something that is repetitive and one might even conclude boring, however it does not have to be so as some who engage in the act of playing *Age of Empires II* find this activity pleasing. Building villages might not be as exciting as waging war is but it certainly does offer a kind of fulfilment to individuals who hold an appreciation for this aspect of the game. There is even an aesthetic aspect to their planning and creation. So the virtual state of feeling like an aesthetician is possible in the game as well as the virtual state of feeling like a strategist, which is present in the second image. There are numerous other states that can appear in the virtual through the procedures of this game, but they are not the current state in which the player is at any given moment. They are rather all of the things the player could become in the sphere of ideas while still remaining a player.

World-building is shown here to be present in the virtual. The world building of *Age of Empires II* happens primarily at the level of the game itself as seen by the spectator. However, it also helps the player to create worlds that cannot be found in the actual sphere, but rather only in the virtual sphere. In addition, repetition is found here too, as the player is repeated in the different virtual states they could experience. Yet at the same time, all of the states the player is inside of the virtual world are created on the basis of the actual and as such carry traces of the actual. If the player undergoes the intensive forces of boredom and excitement it does not necessarily have to mean that they have changed in kind, but merely that on another level, on the level of ideas, they have become something that is analogous to what is happening within the game of *Age of Empires II*.

In *Age of Empires II* we are building a world through small repetitive actions that by our constant effort result in grandiose civilizations. This is the first kind of change, the change which is not a change in kind but a change which entails the slow creation of new
states with the help of repetitive instances in which the player finds themselves. These changes can be found within the game itself. We can take as an example a priest converting a building. The conversion of a building by a priest is something that is characteristic of *Age of Empires II* since there are other games which, even though they may have priest-like figures, do not have the option of converting buildings by means of a priest. In this manner the priest has the ability to take buildings from one civilization and give them to another. This is interesting because here in the virtual world of *Age of Empires II* we are witnessing a deconstruction of one world, i.e. a civilization, which is in this way unbuilt in favor of another. A building is something immaterial and once it is converted it is not changed in regard to its kind but its state has been changed, it belongs to another player and the civilization of that player can use it for the furthering of its own world-building. In the same way a virtual world is being built from the actual while the player is playing the game and ‘stealing’ elements from the game which are directly being incorporated into their own experience which in turn is responsible for the building of a virtual world. In this manner, the individual creates a world that borders between the real and the imaginary. As Boni put it, "world building envisions a balance between fantasy and reality, the imaginary and the real" (Boni, 2017: 102).

The largest and most important factor in the world building scheme is that it allows the player to substitute the elements form daily life that are disliked with elements from both the worlds that have contributed to *Age of Empires II*, i.e. the actual and the virtual in the sense that they can replace what they do not like in the actual and replace it with elements from the game to build an idealized world as the world existing in the actual has many challenges the individual might dislike. The new world that has been built does not represent actual reality but an imaginary reality which might remind us of the ideology the player
creates in relation to the conditions of the modern world and the circumstances in which they find themselves.

The other kind of change would imply a possible change in the thinking of the player which is wrought by the ideology of the game that has been snuck into the player's mind through the distraction of the repetitive activities of the game, that is if we are taking into account the ideology offered by the game and not directly created by the player. At this point it must be clarified that the player forms their own ideology in relation not just to the actual world but also to the ideology found in *Age of Empires II*. Yet, it is hard to ascertain what this change would be. It sometimes seems near impossible to track the changes that happen in the real world with how modernity has accelerated our way of living and in the same way the small repetitive actions of our lives. Thus the dromena that drone and shape the experience of the player are hardly perceivable if the player is unconcerned with every little action taking place in the game. The repetitiveness of the game resembles the fast-paced modern life (even though it takes place in the past), but that does not mean that the conditions for change are not met. We merely have to repeat the fact that the player's ideology is not just created in relation to the modern world when playing *Age of Empires II*, but that it is also under the influence of the ideology the game itself presents. There can be real change occurring this way, but given that the game additionally blurs the line of recognition, real change might almost seem unnoticeable. Bown has a similar view of this,

Yet, in a society which can be described as characterized by endless changeability, in which it appears that newness is generated every day, it becomes less clear what real concrete structural change looks like. (Bown, 2018: 9)
This would mean that though there are many changes happening in the world, be it a virtual or an actual one, it is hard to grasp the lengths to which all of this goes given that the repetition that is found in the game is also found in modern life. The tiny particles of the virtual world of Age of Empires II are mirrored in the actual world events that surround the player, so sometimes the changes that happen in the virtual world and whose ideology finds its way to the player's ideas of the world are the same kind of changes that are pouring from one level of repetitiveness into another in the actual world outside, yet these changes are not generated only through the vicinity of the game's virtual world, but even more so in the way how the player perceives the relations they have to the actual world as in fact this perception is what forms the basis of the player's ideology.

In the campaign menu encountered in the game, one can choose to be immersed in a storyline based on the feats of William Wallace. In this campaign the English are depicted as the "bad guys" while the Scottish are depicted as the "good guys." As the game is played the player most probably will not be thinking about individual historical cases taken from both of these nations but will focus on the general picture told in the story and in this way possibly be influenced by the narrative that has been taken from the course of history. Here we have a demonstration of how a picture of something can be rebuilt. Van den Boomen thinks that,

Games such as Age of Empires (1997-2005), Rise of Nations (2003), and Civilization (1991-2005) invite the player to go on an imaginary expedition, where traveling through landscapes creates a story (Lammes, 2009: 223).

We are traveling as William Wallace through Great Britain on our way towards freedom. On this voyage a virtual state is being created. However, this state of being rebuilt in the virtual is not a real state, but merely an idea demonstrating how repetition present in
the game can influence ideology. The significance of this approach is primarily contained in
the premise that here we do not have a change of state but a direct incursion of an influencing
ideology. Here it is visible that the game’s own ideology helps the player reevaluate their
ideology, i.e. they can reevaluate their circumstances in relation to the actual world and in
this way modify their thinking. The player will not be changed into something else but
influenced to be somebody with new ideas about various phenomena. This person under the
influence of the virtual is the individual who perceives the actual identically as they perceive
it without being in touch with the virtual world but they evaluate it differently after having
been in contact with the game’s ideology which poses questions and challenges for the
player’s ideology as a relation to the actual world they live in. This happens because of the
repetition that is perceived and accepted as something usual and almost to be expected for, as
already mentioned, the line between the virtual and the actual has been blurred under the
influence of modern life. This constant repetition serves to ingrain not only the compulsion
to repeat itself but particular ideological ideas (Bown, 2018: 80).

An example from Age of Empires II that would illustrate this is the use of cheat codes
introducing the COBRA catapult. This is not an ordinary device belonging in the Middle Ages
where most of the Age of Empires II story is set. This vehicle not only destroys the aesthetics
of the game by introducing something that is out of place and simply not a part of the period
in which the game is set; it also creates a virtual state in which the importance of figuration
and aesthetic beauty are thrown aside in favour of practicality. In this way the modernity of
everyday life cancels the line between the actual and the virtual not only through the
influences met in the real world but also through the ideas found in the game. Thus this mod
presents two choices: Age of Empires II can be played as it was designed or it can be
banalized by inviting modern vehicles into a distant epoch in which large empires were built.
Both of these approaches would be marked by repetition which through the ideology of Age
of Empires II can change through sublimity the player's evaluation of their own ideology built and formed in the actual world.

3. EXTENSIVE PLASTICITY

The changes that are effectuated on the individual indulging in Age of Empires II can be seen as either temporary or permanent. This depends on the approach that one is to take to this difficult question. One may ask why this is important. It is of huge importance because we must wonder whether the individual playing Age of Empires II is the same person after the experience of playing the game as before that experience. Any change in kind, meaning one that would occur with a full break from what or who the player was before, could be called a new world, but not a virtual one. We have mentioned and explained intensive forces and their role in the reshaping of the states that an individual might pass through before reaching a point in which they feel a certain way or in which their ideology has been formed through the help of constant repetitive processes ingrained in the game. However, we have not discussed the other possibility of the playing experience, namely a permanent change that might happen in the player due to the presence of extensive forces. Unlike intensive forces, extensive forces cause a change in kind of the player rather than just a change in state.

Intensive forces, as has already been stated, are those that bring a change to the state of the person, but not to their kind and these can best be understood through comparison with the intensive properties such as temperature or pressure, which cannot be divided (DeLanda, 2002: 26), whereas extensive forces are capable of causing a change in kind, leaving the person not as they were before, but making them an altered individual as can be construed from the extensive properties themselves such as length, area, volume, quantity of energy, or entropy which in themselves are intrinsically divisible (DeLanda, 2002: 26). Through their working the extensive forces bring about the manifestation of a clean break. A clean break
would signify, in terms of topology, or the study of the twistings and turnings of objects, the point from which a clear line can be traced between the old individual and the new one in the sense that they have changed something about themselves that is almost a defining aspect of their personality. Deleuze is not interested in extensive forces \textit{per se}. However, we are.

One example that seems like it features intensive forces, but might actually contain extensive ones, could be the upgrading of ages that follow the progress of technological advancement. The intensive forces that are present here are changing the mood of the player who strives to reach a higher level of civilization while at the same time balancing the empire. As for the extensive forces, each experience gathered while creating an empire is different so learning is a constant in this matter. Each time the player encounters repetition and alternation which subsumes the experience into something familiar yet always unique (Hanson, 2018: 111) and with these repetitive yet prone to leaning experiences the player is developing aspects of his personality connected to knowledge. \textit{Age of Empires II} is a strategy game in which players command ancient civilizations such as Egypt, Greece, Persia, Assyria, Phoenicia, and Rome. They build their economic base, explore surrounding territories, and wage war. What is striking is the way the game inscribes the logic of high-tech capital back into the dawn of ages (Kline, 2003: 167). As Herz observes: "The grand sweep of human events is expressed as a series of technological upgrades" (qtd. in Kline 167), and as Shelley observes: "the people who get the technology fastest often have a decisive advantage. If you’ve got a Feudal Age army fighting an Imperial Age army, you’re probably going to lose" (qtd. in Kline 167). Here, we have progress from one stage of technological development to another, and a demonstrable difference between the two civilizations. The new civilization has evolved from the old one, however it is more advanced and as such much more powerful and this marks a clear break between two worlds, the world built on the foundations of the \textit{Feudal Age} and the world built on the foundations of the \textit{Imperial Age}. But we should not
only take into account the changes that happen to the empires in the game with the
technological progress of each individual empire. The person playing the game undergoes the
effects of the intensive forces and while these are working they are being molded on a virtual
level. What interests us is whether these intensive forces can have some extensive properties
if they are repeated.

Let's take into account the possibility that an individual might be fundamentally
changed through their experience of *Age of Empires II*. If this is true, in what sense would it
be exactly? Is this change irreversible or is it just a phenomenon that appears and then
disappears after a certain lapse of time? We cannot ascertain this for sure, but it would be
interesting to look at both sides. Also, this change might either be negative or positive, or it
can even be a negative streak in a positive occurrence, or the opposite. The change in
question becomes manifest through *plasticity*, which merely denotes any kind of mutation in
the substantial aspect of an entity. This mutation is generally accepted as something that is
connected to how the person changes in the direction of growth. The plasticity has the role of
upgrading knowledge and cognition through beneficial experiences. As an extensive force it
helps the individual adapt to new situations in an environment that is conductive to learning
and development and that is tied to the neuronal processes that happen in the mind of the
person when plasticity as an extensive force is observed. According to Catherine Malabou:
"Plasticity is only evoked when there is a change in the volume or form of neuronal
connections that impacts the construction of personality" (Malabou, 2012: 3).

The common connotations of plasticity are of the positive kind (the mental progress of
a child, for example), but they can also be viewed form the other end of the spectrum. When
terrible things happen, plasticity can also be present. This time, the person undergoing the
after effects of the change that has occurred has not grown, but lost something. The outcome
of such a process arguably results in a new person, and yet a person who is the same. An
individual can either progress from a child into an adult or at one stage of their life, after an accident befalling them, they can undergo a permutation that leaves them as an obviously altered individual, be it interiorly or exteriorly. As Malabou says:

The change may equally well emerge from apparently anodyne events, which ultimately prove to be veritable traumas inflecting the course of a life, producing the metamorphosis of someone about whom one says: I would never have guessed they would "end up like that." (Malabou, 2012: 6)

The person playing Age of Empires II can arguably change too, so that the person playing the game, once the interaction with the game is finished, is not the same person anymore. However, in this case we are talking about changes in the mind which can either be creative or destructive, depending on the context and what the individual has subjectively perceived and absorbed as in their eyes it is something to be had as a useful trait or discarded as a sign of decadence. Many changes in thought happen in Age of Empires II and these can vary from cultural to capitalist changes, depending on the repetitive activity that informs the psyche of the current direction of the game. Something might appear in the player's psyche which makes them go through a change in kind. This change is in particular what is responsible for the potential permanent change of the individual under the extensive forces tied primarily to the neurological processes happening in the mind. Extensive forces are those that cause permanent change to something through division. The extensive force here at work would be the creation of new neurological connections in the mind instigated by the game. These neurological connections happen in specific cerebral regions responsible for the task of operating in this case the various functions of Age of Empires II. One study of video games shows that regional differences connected to volume and form of neuronal connections can
predict learning in complex tasks that entail the use of a variety of perceptual, cognitive, and 

motor processes (Basak, 2011). Different cerebral regions are obviously responsible for their 

respective functions when neurological connections are being created. By way of creating 

new connections, the mind is separating the old connections that were formed and in this way 

this extensive force of separation makes up for the possibility in the change of perception of 

the player through new neurological connections. Thus, the change that occurs is drawn from 

the alternatives that are created in the mind by means of the working of the extensive force of 

separation. The application of this extensive force is what causes changes to the player. It is 

making a change in kind in the actual without destruction in this instance by merely forming 

alternative options. However, given that all of this is happening in the mind which makes 

decisions when faced with options, these decisions reveal the system, i.e. the ideologies of the 

actual world in relation to how the ideology of the player is influenced when the individual is 

interacting with Age of Empires II. Ideologies based on the experience of the actual world, 

just like that from the game, are bringing their own ideas through repetition. The player is 

perhaps aware of the ideologies pertaining to the actual but in the realm of the virtual, the 

ideology that is there can influence the player without the player noticing the influence by 

means of repetitive patterns. One example that I would like to take from the game would be 

the creation of the ideology of the entrepreneur as the player enters the Imperial Age. With 

the appearance of markets and docks with which the player is faced in Age of Empires II, that 
can bring gold so necessary for the later stages of the game, the player is encountering 
something that is happening in the actual world yet is now reappearing in the virtual world of 

Age of Empires II and they learn how to adapt to the circumstances between the actual and 

the virtual by estimating how to grow and sustain themselves as an empire through the 

entrepreneurial activities of trading accompanied by either a repetitive exchange of resources 
or ships and trade carts following the same route repetitively on their journey to earn gold. It
would also be necessary to notice that these repetitive patterns are the bridge that connects the virtual from the game to the actual, as after all, the world building of *Age of Empires II* mimics the world building happening in the actual, but through allowing the player to experience a world without the burdens of modern life, it also uses repetition to give them a chance to enter a dreamlike state. As Bown states,

> The problem is that the possibility of change is hard to accept without a concrete image of what the future would look like. If the adage that it is easier to imagine the end of the world than the end of capitalism has any truth in it, then videogames can save us from this impasse that prevents us from dreaming of alternatives. They can do this not by reviving utopian dreams but by making us see dreams quite differently: as always the symptom of the system from which they emerge. (Bown, 2018: 50)

One way to think of this is that the extensive changes that are done to the mind of the player might leave them a changed person through the new conditions of abundance encountered in the imaginative world which cannot on the other hand that easily be met in the harsh world of the actual. The reality of the virtual world-building provides the player with an alternative to what they are used in the actual reality. The repetitive characteristics found in *Age of Empires II* seem to imply extensive forces which are not concerned with the virtual as much as they are with the actual because this creates a new individual, a world which has been changed. This can be done either through the extensive force of plasticity or the extensive force of separation, which has already been mentioned. If plasticity is taken into consideration it could be said that the player is "conditionable," which Malabou argues is actually part of a computerized world, rather than just the human one as she previously argued:
"Conditionability" obviously refers initially to brain plasticity, that is, the potential for neuronal architecture to be shaped by the influences of environment, habit, and education. (Malabou, 2019: 58)

The plasticity that is the extensive force bringing change to the individual’s perception is changing neuronal bridges in the player’s mind. This is important since phenomena that are connected to the game can help the player better their performance of various tasks in the actual world. For example, the speed used to connect various functions inside the game to build a world that is according to the wishes of the player is not just something that is confined to the limits of the game they are playing. The newly acquired speed can also manifest itself in other situations (Dye, 2010), i.e. day-to-day activities that are a part of the actual world. This is an obvious case of positive plasticity induced by the repetitive patterns found in *Age of Empires II*.

For example, as the world building of *Age of Empires II* offers innumerable scenarios, we can trace the thinking patterns of the player through one such scenario. If the player should decide to build an empire starting with their first farms and reaching the heights of building a fortified medieval town with its castles, they are faced with two probabilities. A once mighty kingdom might crumble to pieces, deconstructed from its castles to its farms or if the player is a good enough strategist, they can overcome their enemies. Both of these outcomes can influence the mind of the player. The first one can bring the perception of the defeat of the player where we would have negative plasticity as the perception of a virtual world building that is crumbling that is based on ideas taken form the actual world can induce the player to assume a defeatist position. The second one can make the player perceive the actual world through the lens of the virtual world as a place of countless possibilities where they can win against all odds under the influence of the positive plasticity such as examples
from *Age of Empires II* would provide. Through the replaying of the re-creation of the old empires form *Age of Empires II* the player is subject to separation that occurs between what they envisioned the old world civilizations would be like in terms of efficiency when empires are confronted and what they are in the game (Hanson, 2018: 130). This separation creates a kind of disillusionment with what they perceived to be a given, yet is not in the game so they are left as an individual who has adapted their learning scope to the world building of the game as they learn how to differentiate between actual historical representations of the empires and the virtual representations of the empires provided by the game. In this way, the player has created the ideology of realistic differentiation which will influence them as an individual. This ideology shapes the world building the player initiates in the virtual and which continues to find its way into the actual world building through contrasting the imaginative with the real.
4. CONCLUSION

*Age of Empires II* is full of repetitive actions such as tending to farms. I connected these actions with dromena because they are always present in the game and with constant repetition escape the active attention of the player. In addition, I developed the influence of dromena along with the idea of intensive forces because through their not being observed actively, they influence the player without being noticed. In short, the connection between dromena and intensive forces is that the presence of the game's ideology influences the player in a passive way. The influences it exerts upon the player leave the player changed but not a different being as such (hence an intensive force). Then I looked at the role of extensive forces in the game. This was a challenge to Deleuze's thinking because for him the extensive forces can possibly dissolve prior identities which I have demonstrated as not being the case. In order to develop the role of extensive forces I used Catherine Malabou because she has a different approach which is based on the changes that are brought about in the perception of the person playing *Age of Empires II*. The role of extensive forces in *Age of Empires II* is that they influence the player in such a way that they are the same person but with different outlooks on certain aspects of the actual worldbuilding through the ideas of the virtual worldbuilding. When we combine the effects of dromena and intensive and extensive forces we can develop our thesis which is that the world built in *Age of Empires II* leads to frustration in the actual, i.e. real world as the player gets a clearer picture of reality than the one they had before engaging in playing the game. In this way *Age of Empires II* helps the player see the actual world more clearly through the virtual world as their illusions of grandeur they have experienced in the game are shattered when they have to face reality where one has to face hardships, unlike in the game.
5. ABSTRACT

The classic strategy game Age of Empires II is a creative representation of the historical past revolving around the building of empires. It offers a world of ideas taken from the actual world and represented in the virtual world of the game. The virtual and the actual in the game are intertwined in such a way that the game reflects many facts from the actual, yet it is shaped by the creativity of the game developers as it continues to offer a new world apt for world building in the virtual. Together with the repetition and the dromena that are present in the game, the intensive and extensive forces that influence the player who is playing the game help the player encounter and be introduced to new experiences tied to new ideas through the act of world building.

Key words: Age of Empires II, actual, virtual, world building, repetition, dromena, intensive forces, extensive forces, ideas.

SAŽETAK

Klasična strateška igra Age of Empires II kreativni je prikaz povijesne prošlosti koja se vrti oko izgradnje carstava. Nudi svijet ideja preuzetih iz stvarnog svijeta i prikazanih u virtualnom svijetu igre. Virtualno i stvarno u igri su isprepleteni na takav način da igra održava mnoge činjenice koje su stvarne, a opet oblikovane kreativnošću stvaratelja igre dok nude novi svijet pogodan za gradnju svjetova u virtualnom. Zajedno s ponavljanjem i dromenima koji su prisutni u igri, intenzivne sile i ekstenzivne sile koje utječu na igrača koji igra igru pomažu igraču da se susretne i upozna s novim iskustvima povezanim s novim idejama kroz čin gradnje svjetova.

Ključne riječi: Age of Empires II, stvarno, virtualno, gradnja svjetova, ponavljanje, dromena, intenzivne sile, ekstenzivne sile, ideje.
6. BIBLIOGRAPHY


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Obrazac I.P.

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Znanstveno područje: TEORIJA MEĐU

Znanstveno polje: IGRAONJA SVIJETOV

Vrsta rada: DIPLOMSKI RADO

Mentor/ica rada: BRIAN DANIEL WILLIAMS

(ime i prezime, akad. stupanj i zvanje)

Komentor/ica rada: prof. dr. sc. SIMON JOHN RYLY, doc. dr. sc. IVAND PETROVIĆ

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